

**The Long Beach Airport Area Complex
An Economic Impact Analysis, 2003**

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TABLE OF CONTENTS

Section	Page
Executive Summary	3
I. Introduction	6
II. Methodology	9
III. Economic Impact - Long Beach Area Airport Complex	10
IV. Economic Impact - Long Beach Airport Dependent Activities	12
V. The Long Beach Airport	13
VI. Fiscal Impacts	21
VII. Conclusions	23
Appendix A. Long Beach Airport Tenant Directory	24
Appendix B. Long Beach Airport Complex, List of Firms	30
Appendix C. Long Beach Airport Dependent Activities	35
Appendix D. Long Beach Air Transportation and Related Activities	38

Executive Summary

- This study measures the economic impact, based on 2003 data, of three study areas. The most inclusive is the *Long Beach Airport Area Complex*, which is defined relative to geographical boundaries (see bullet below.) Within the Complex, we also analyze two subsets of data, referring to *Long Beach Airport Dependent Activities* and *Long Beach Air Transportation and Related Activities*.

Long Beach Airport Area Complex

- The Long Beach Airport Area Complex is defined as the large geographical area north of Interstate 405, south of Carson Street, and bordered by Clark Avenue and Cherry Avenue. Our study found a total of 148 establishments in this area, with direct employment of almost 16,000, generating an estimated payroll of slightly more than \$1 billion and \$4.1 billion in sales of goods and services.
- Direct employment in the Long Beach Airport Area Complex is highly concentrated in manufacturing (10,925 jobs) and transportation (2,065 jobs) and is associated with an annual average payroll of \$65,273, which is 60% above the average payroll for Los Angeles County.
- When indirect or multiplier impacts are added to the direct impacts measured above, the Airport Area Complex is found to support over 48,000 jobs in the region and is associated with total regional earnings surpassing \$2 billion and regional output of more than \$9 billion.

Long Beach Airport Dependent Activities

- Our sample of firms within the Airport Area Complex is restricted to only those firms whose activities are directly dependent on the airport (Long Beach Airport Dependent Activities.) In this sub sample, we found 84 establishments. These establishments generated direct employment of slightly more than 13,000 jobs. These airport dependent jobs generated an estimated payroll of \$886 million and an annual output of \$3.5 billion.
- When indirect or multiplier impacts are added to the direct impacts measured above, Long Beach Airport Dependent Activities are found to support over 41,000 jobs in the region and are associated with total regional earnings of almost \$2 billion and regional output of almost \$8 billion.

Long Beach Air Transportation and Related Activities

- The Long Beach Airport, established in 1923, was the first municipal airport to serve Southern California. At present, the Airport covers 1,166 acres and has five runways. The Long Beach Airport is a small-hub airport.

- Approximately 60% of all airline tickets sold for the Long Beach Airport are purchased by individuals or firms in Los Angeles County. Orange County accounts for 35% of all tickets sold, with other counties accounting for the remaining 5%.
- When we further restricted our sample of firms to include only those directly involved in or directly supporting air transportation (Long Beach Air Transportation and Related Activities), we found 47 establishments. The direct employment of these establishments was slightly less than 2,500 jobs and generated an estimated payroll of \$116 million.
- Compared to the Long Beach Airport Area Complex, employment in Air Transportation and Related Activities is relatively concentrated in lower-pay service sector and transportation jobs (such as clerks in airport retail operations and operators of airport shuttle buses). However, even after restricting our sample, we still find that the average payroll in Long Beach Air Transportation and Related Activities is \$46,700, which is 14% higher than the average pay for Los Angeles County.
- When indirect effects are included, Long Beach Air Transportation and Related Activities are found to support 6,400 jobs in the Southern California region, generating an annual payroll of \$267 million and annual output of \$984 million.
- A summary of the direct and total impacts of the three study areas is found in the table below.

	Employment		Earnings		Output	
	Direct	Total	Direct	Total	Direct	Total
Air Transportation Activities	2,500	6,400	\$120 mn	\$267 mn	\$450 mn	\$984 mn
Airport Dependent Activities	13,000	41,000	\$890 mn	\$2.0 bn	\$3.5 bn	\$7.8 bn
LB Airport Area Complex	16,000	48,000	\$1.0 bn	\$2.3 bn	\$4.1 bn	\$9.2 bn

- We estimate that at least 24,000 overnight visitors used the local airport in 2003. The associated expenditures of these visitors included \$8.8 million on hotel expenditures and \$8.1 million of expenditures in other local businesses, such as restaurants, retail, and entertainment. Additionally, flight crews had \$2.3 million in lodging expenses and \$1.4 million in food and related expenditures during 2003.
- The Airport Enterprise Fund was created by the City of Long Beach to fund Long Beach Airport operations, capital and other costs. The Enterprise Fund operates without City General Fund support, and approximately \$ 7 million of the Airport operating funds go to purchase services from the City General Fund and other City operating units, such as Police, Fire, City Attorney, City Council, Community Development, and Engineering/Public Works.

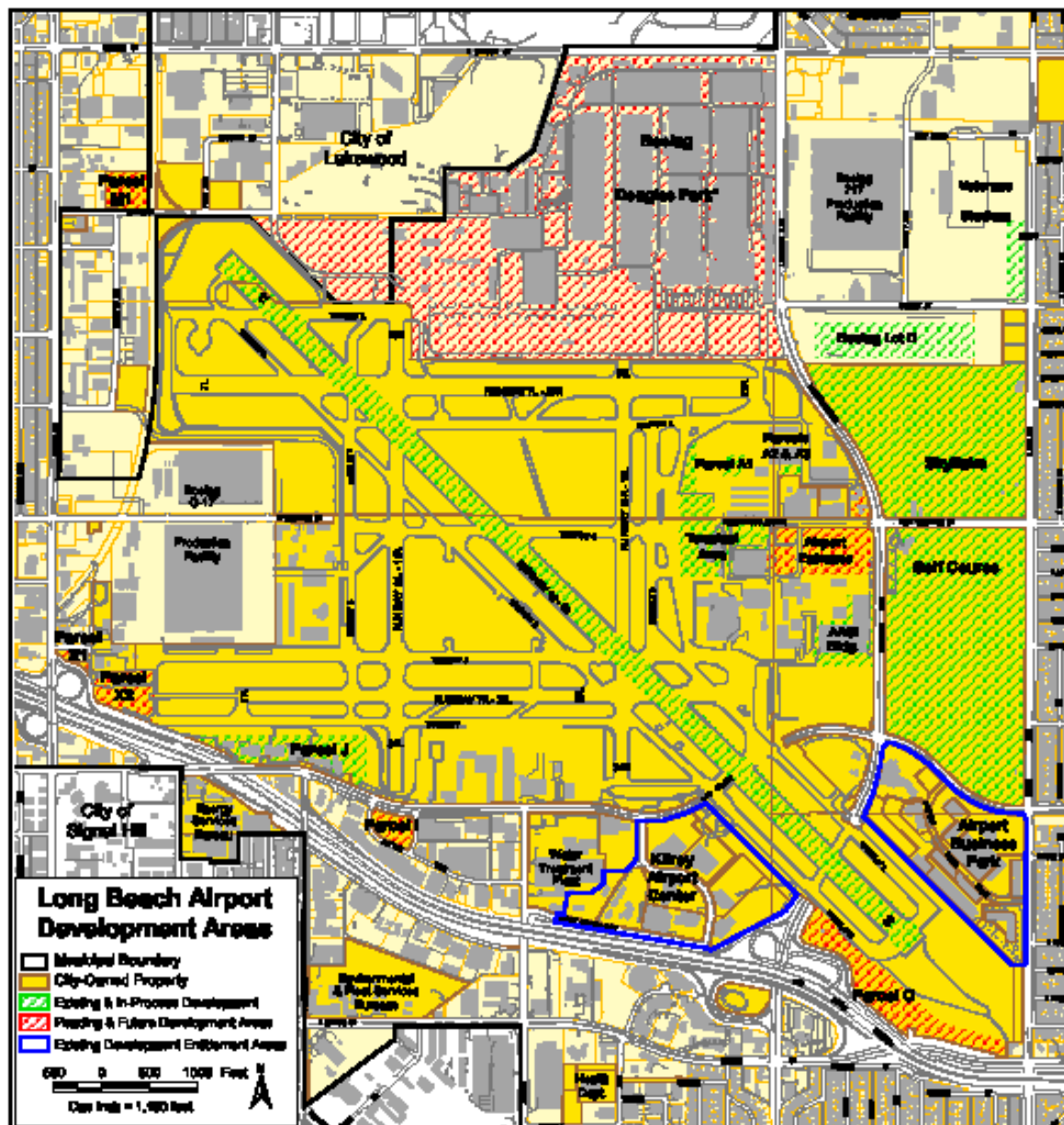
- In 2003, the City Airport Enterprise Fund generated \$23.9 million in fees or revenues. The majority of these fees were related to parking, fixed-base operators, car rentals, and landing fees. Property taxes in the Long Beach Airport Area Complex contributed \$2 million to City revenues while retail sales generated \$1.3 million in revenues for the City of Long Beach. In addition, the Long Beach Airport Area Complex generates a variety of other taxes and fees including the transient occupancy tax, business license taxes, and utility user taxes. The total fiscal impact to the City or the Airport is in excess of \$27.2 million annually.
- The Long Beach Airport is an important source of economic vitality for the city. As indicated in the 2010 Strategic Plan, business opportunities need to be expanded within the constraint of the existing noise ordinances.

I. Introduction

Economic impact reports provide a profile of an enterprise or activity in terms of the number of jobs, earnings, and the value of output captured by the regional or national economy. These reports provide a snapshot of the economic activity at a moment in time, usually a calendar year. The focus of this study is to estimate the economic activity generated by the Long Beach Airport, including not only activities related directly to air transportation, but also including other activities that take place on the properties adjacent to and surrounding the Long Beach Airport. The Long Beach Airport supports commercial and general aviation as well as a variety of aerospace manufacturing and related activities that would not exist without access to the runways and the airport terminal. Given the breadth of activities associated with the airport, our study initially focused on the large geographical area north of Interstate 405, south of Carson Street, and bordered by Clark Avenue and Cherry Avenue. Most but not all of the property is owned by the City of Long Beach. For purposes of our study, we designate this large land area as the Long Beach Airport Area Complex. As can be seen in the accompanying figure, this large geographical area includes the Boeing properties and the Skylinks Golf course as well as other business enterprises, such as the Long Beach Marriott and the Kilroy Airport Center.

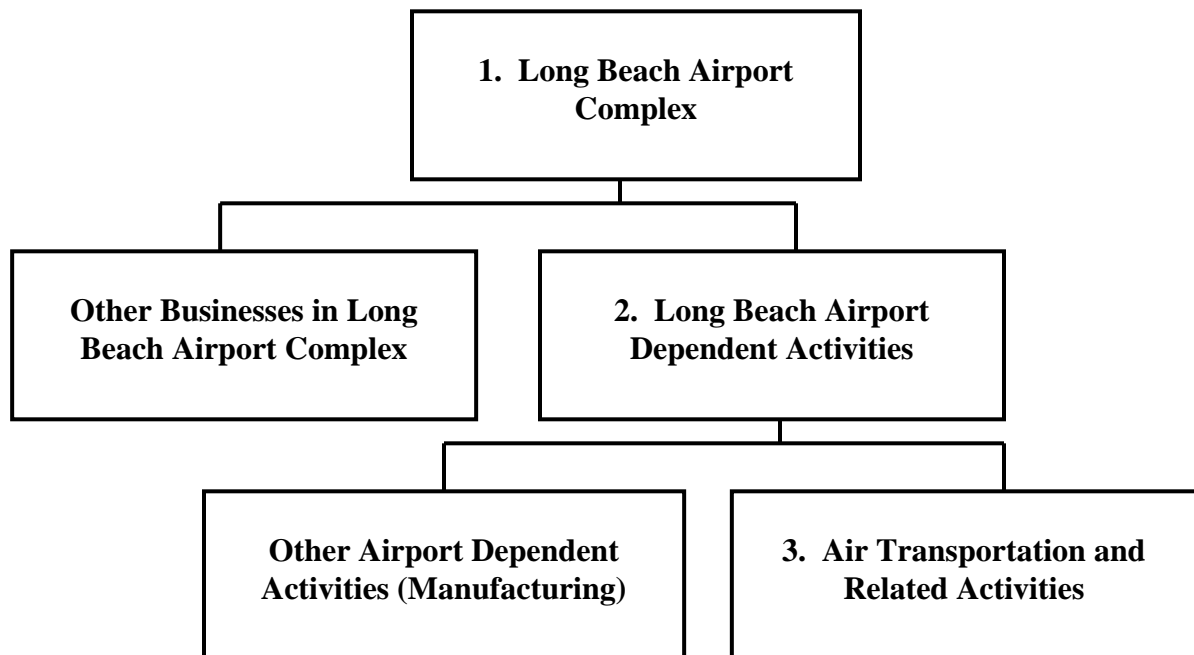
The study year of 2003 was chosen as this was the most current year for which complete data was available¹. During 2003, the Long Beach Airport serviced approximately 3 million passengers, and this level of service provides a more reasonable profile of expected passenger loads than prior years. While 2003 does provide a better profile of commercial air transportation activities, it is important to note that during this period 240 acres of Boeing property was idle. The proposed Boeing development called Douglas Park is a mixed-use development project which includes commercial, light industrial, retail, and residential components. The Boeing Realty plan also includes hotel usage that is directed at business travelers, some of whom would utilize the Long Beach Airport. In addition, Skylinks Municipal Golf course was in the midst of a major renovation during the study period. Inasmuch as the construction and renovation activities associated with the golf course are transitory, we did not include values for these activities. Similarly, the demolition of buildings on the Boeing site, soil mitigation activities, the enhanced improvements along Lakewood Boulevard, and other construction activities are not addressed in this report.

¹ The study began July 2004 and the most current data was 2003. The 2004 data would not change the report in a material way, although the magnitudes would change. Inasmuch as the region's economy performed better in 2004 than 2003, reliance on 2004 data would involve an upward revision in estimates.



There are three main study areas analyzed in this report. The most inclusive is the Long Beach Airport Area Complex, which is defined relative to the geographical boundaries described above. Within the Complex, we also analyzed two subsets of data organized by industry referring to Long Beach Airport Dependent Activities, and Long Beach Air Transportation and Related Activities. Long Beach Airport Dependent Activities includes all firms that, by their nature, must be located at an airport. This category includes not only enterprises involved in air transportation but also firms involved in the production of aircraft and aircraft parts. Long Beach Air Transportation and Related Activities, which is the smallest footprint, focuses on commercial and general aviation activities as well as directly-related enterprises. The relationship between the three study areas is outlined in the organizational chart below.

Three Study Areas Used in Long Beach Airport Economic Impact Analysis



An important element in the efficiency of the overall Airport is the terminal and related infrastructure. While our study will provide insight into the value to the greater community of increased passenger traffic, this study is not a benefit cost analysis of terminal improvements.

The methodology that serves as the basis for our study is discussed in Section II. The economic impact of the Long Beach Airport Area Complex is presented in Section III. Section IV discusses the economic impact of the Long Beach Airport Dependent Activities. The economic impact of Long Beach Air Transportation and Related Activities is contained in Section V. Section VI contains the fiscal impacts associated with the Long Beach Airport Area Complex. For our purpose, we included both revenues generated as part of the City's general fund and revenues earmarked for the operation and maintenance of the airport.

II. Methodology

To study the Long Beach Area Airport Complex requires the development of a detailed database of the firms and enterprises located on these properties. In order to generate this database, we relied on a number of different sources including an airport area tenant list provided by the City of Long Beach; data purchased through InfoUSA; data from Dun and Bradstreet; the Long Beach dataset maintained by the Office of Economic Research at California State University, Long Beach; and telephone surveys. Using these sources, we were able to calculate the number of employees, earnings, and the value of output of establishments in the Long Beach Airport Complex. The tenant list and the profile of the 148 establishments are found in Appendix B.

To study the Long Beach Airport Dependent Activities, we reduced the set of 148 establishments by focusing on the standard industrial classification codes related to aviation and aviation-related activities. There were 84 establishments that satisfied this condition and these establishments are listed in Appendix C.

To identify the set of firms involved in Long Beach Air Transportation and Related Activities, we again sorted the set of establishments by the standard industrial classification codes related to air transport, airport terminal operations, and ground transportation operations linked directly to the airport (such as rental car establishments). This sort reduced the number of establishments from 84 to 47 and these establishments are listed in Appendix D.

The calculation of an economic impact involves the specification of direct and indirect consequences associated with the three study areas. The direct impacts are the number of jobs, the earnings, and the value of output generated by these establishments. This direct economic activity, in turn, encouraged other indirect economic activity. To calculate the indirect effects, we used the Bureau of Economic Analysis's RIMS II input-output tables for the regional economy.

III. Economic Impact - Long Beach Area Airport Complex

A. Direct Impacts

Our study of businesses within the Long Beach Area Airport Complex footprint found a total of 148 establishments, which generated direct employment of almost 16,000 jobs. These jobs generated an estimated payroll of slightly more than \$1 billion. These businesses directly generated \$4.1 billion in sales of goods and services.

Table 1 shows the jobs in the airport area, by sector.

Table 1. Total Employment by Sector, Long Beach Area Airport Complex, 2003

Sector	Employment
Manufacturing	10,925
Transportation	2,065
Wholesale Trade & Retail Trade	275
Finance, Insurance & Real Estate	245
Hotel, Personal & Business Services	493
Automotive Services (Rental Car) & Parking	234
Health, Legal & Educational Services	806
Other Services	662
Government	235
Total	15,940

As the table indicates, the majority of jobs in the airport area are in the manufacturing sector. This is primarily due to the presence of Boeing, which is the largest single employer in Long Beach. There are also a significant number of jobs in the transportation and services sectors. In the transportation sector, we have the employment of airlines, freight carriers, small aviation firms, maintenance and fueling operations, and ground transportation such as shuttles and limousine services. The retail and wholesale trade employment largely reflects aviation-related businesses as well as a few eating and drinking places. The automotive services and parking employment largely reflects the activities of rental car businesses and parking garages serving the airport. In health, legal and educational services, there are a significant number of businesses engaged in education-related aviation, for example, flight schools and flight training operations. In the category “other services,” there are a wide variety of firms providing services including accounting, consulting, membership organizations, and other services.

Boeing has recently announced its intentions to cancel production of the 717. This decision will reduce the number of manufacturing jobs at the Boeing facility. We do not have a firm estimate of the loss of these jobs, however, public reports suggest that several hundred workers will be affected.

**Table 2. Average Payroll Comparisons:
Long Beach Area Airport Complex and Los Angeles County, 2003**

	Average Payroll
Long Beach Airport Area – all industries	\$65,273
Long Beach Airport Area - nonmanufacturing	\$46,585
Los Angeles County	\$40,928

Table 2 compares the average payroll in the Long Beach Airport Area Complex to the average payroll of Los Angeles County. The average payroll in the Airport complex, at \$65,273, is significantly higher than that of Los Angeles County. This may not be surprising, given the amount of high value-added manufacturing jobs in the area. Still, even if manufacturing employment is excluded, the average pay in the Airport complex stands 14% above the average pay for Los Angeles County as a whole.

B. Indirect Impacts (Multiplier Effects)

The direct economic impacts identified in the previous section stimulate additional indirect impacts. These occur because the Airport area businesses who sell their goods and services respond with increased hiring and increased purchases of intermediate inputs. These purchases stimulate still further purchases of intermediate inputs which, in turn, stimulate still further purchases, and so on. Each round of indirect purchasing has a smaller impact on the local economy than the last, since with each round, some portion of the dollars flow to outside suppliers.

Initial direct sales, plus all the intermediate purchases which they stimulate, constitute the total economic impact of businesses in the Airport area. In addition, multipliers are also available to measure the indirect impact of Airport activity on regional employment and earnings.

The most accurate approach to estimating the indirect regional impacts associated with an initial direct impact is with the use of a regional input-output table. An input-output table identifies all of the inter-industry flows of goods and services within a specific region and enables one to translate an initial change in final demand into total regional impacts.

Our indirect impact estimates for the Airport area are obtained by the Bureau of Economic Analysis's RIMS II input-output table for the five-county, Greater Los Angeles area (including Ventura, Los Angeles, Orange, Riverside, and San Bernardino Counties). To apply multipliers from the RIMS II model, we break down the initial impacts (sales, employment, and earnings) into 39 detailed Standard Industrial Classification (SIC) industry categories. To the impacts in each of these categories, we apply the corresponding regional multiplier. The impacts by industry are then summed to obtain total regional economic impacts. Table 3 reports the aggregate results.

Table 3. Total Economic Impacts of the Long Beach Area Airport Complex, 2003

	Employment		Earnings		Output	
	Direct	Total	Direct	Total	Direct	Total
Impacts	15,940	48,085	\$1.04 bn	\$2.29 bn	\$4.12 bn	\$9.22 bn

The economic activity at the Airport directly supports 15,940 jobs. As area firms purchase inputs from other regional suppliers, they indirectly support another 32,145 jobs in the Southern California region, thus directly or indirectly supporting more than 48,000 jobs in the region. Similarly, Airport area firms create economic activity in the region that generates direct earnings of over \$1 billion and total regional earnings surpassing \$2 billion. Finally, the output of Airport area firms, which totals slightly more than \$4 billion, stimulates an additional \$5 billion of production in the region, thus leading to a total economic impact of over \$9 billion annually.

IV. Economic Impact - Long Beach Airport Dependent Activities

A. Direct Impacts

We examined the economic impact of firms in the Complex that are dependent on the Long Beach airport. Stated differently, we focused on firms that must be located in close proximity to an airport. Included in this sample are the activities related to air transportation as well as manufacturing firms that produce aircraft and aircraft parts. When we restricted our sample of firms within the airport area to only those in airport dependent activities, we found 84 establishments. These establishments generated direct employment of slightly more than 13,000 jobs. Thus, the establishments in Long Beach Airport Dependent Activities account for 57% of all establishments in the Long Beach Airport Complex and 82% of the complex's jobs. These airport dependent jobs generate an estimated payroll of \$886 million.

Table 4. Long Beach Area Airport Complex & Airport Dependent Establishments Compared, 2003

	All Airport Complex Establishments	Airport Dependent Establishments
Employment	15,940	13,017
Payroll	\$1.04 bn	\$886 mn
Average Payroll	\$65,300	\$68,100
Output	\$4.12 bn	\$3.47 bn

As the table indicates, airport dependent jobs are associated with a high average payroll. The average payroll of airport dependent jobs is 4% higher than the average pay in the airport area, and 66% higher than the average pay for Los Angeles County. Airport

dependent establishments account for 84% of the total output of all establishments in the Airport complex, totaling almost \$3.5 billion in goods and services.

B. Indirect Impacts (Multiplier Effect)

As in the section above, we can compute both the direct and indirect impacts of airport dependent businesses operating in the Long Beach Airport Complex. As the table indicates, the 13,000 jobs supported by Long Beach Airport Dependent Activities indirectly support another 28,000 jobs in the region, leading to a total impact (direct plus indirect) of over 41,000 jobs in the region.

Similarly, as the \$886 million in earnings generated by Long Beach Airport Dependent Activities are spent in the local economy, they lead to the creation of an additional \$1.1 billion in earnings across the region. Thus, regional earnings associated with airport dependent employment total almost \$2 billion.

**Table 5. Total Economic Impacts
Long Beach Airport Dependent Activities, 2003**

	Employment		Earnings		Output	
	Direct	Total	Direct	Total	Direct	Total
Airport Dependent Activities	13,017	41,137	\$886 mn	\$1.97 bn	\$3.5 bn	\$7.83 bn

Finally, the \$3.5 billion in goods and services produced in Long Beach Airport Dependent establishments stimulate the production of an additional \$4.3 billion in goods and services in the region, leading to a total regional output impact of almost \$8 billion.

V. The Long Beach Airport

Civil aviation is an integral part of the U.S. economy and accounts for a total economic impact of over \$900 billion and 11 million jobs, representing 9% of gross domestic product.² Commercial aviation's contribution is 88% of the total economic impact and general aviation represents 12% of these activities nationally. The United States has the world's most extensive airport system, which includes over 19,000 airports of which 5,300 are public facilities. This system of airports not only facilitates the movement of passengers and cargo but also is an essential element in national defense. Beyond the national economic impact, civil aviation fosters the interdependencies necessary for the efficient performance of the global economy. As the global economy continues to expand, the competitiveness of the U.S. economy relies on its transportation infrastructure. As a consequence, national, regional, and local economic growth is linked to the aviation industry.

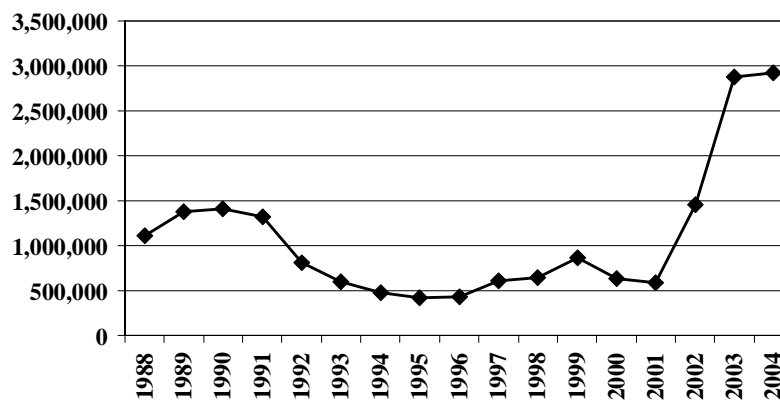
2. "The National Economic Impact of Civil Aviation," DRI-WEFA, Inc. July 2002.

The Long Beach Airport, established in 1923, was the first municipal airport to serve Southern California. Initially, the airport was named Daugherty Field after Earl Daugherty, one of Long Beach's pioneer aviators. At present, the airport covers 1,166 acres and has five runways. The Long Beach Airport is defined as a small hub airport. The airport is also recognized as one of the busiest general aviation airports in the world. The entire airport in Long Beach operates within a Noise Compatibility Ordinance, which was the outgrowth of extensive litigation resulting in a settlement in June 1995 approved by the Federal District Court. Under the terms of the settlement, 41 commercial and 25 commuter daily flights are permitted, with some limited additional growth if noise is maintained within the 1989 baseline framework, as established by the settlement.

A. Commercial Air Traffic

Despite the long and rich history associated with Long Beach Airport, the Airport has only recently emerged as a regional airport hub. As recently as 1980, the airport served fewer than 200,000 passengers annually. By 1984, passenger traffic had increased to over one million passengers and peaked in 1990 with 1.4 million passengers. During the early 1990s, there was a steep slide in passenger traffic that was directly linked to the major recession experienced by the Southern California regional economy as well as the on-going litigation associated with the City's noise ordinance. Despite continued efforts to market and attract air carriers to the Long Beach Airport, passenger traffic continued to decline and finally bottomed out in 1995 with approximately 425,000 passengers. In June 1995, the Federal District Court approved the settlement concerning the noise ordinance and, with an improving regional and national economy, passenger traffic steadily improved at the airport from 1996 to 1999.

Long Beach Total Airport Passenger
Traffic, 1988-2004



In 2001, passenger traffic declined in response to the national recession as well as the horrific events of September 11, 2001. Since 2002, the Long Beach Airport has seen a sharp and dramatic increase in passenger traffic, serving approximately 3 million passengers in 2004. This sharp increase in passenger traffic is, in part, related to post 9/11 trends in the air transportation industry. These trends include the emergence of lower cost carriers who concentrated operations in less congested airports; increased focus on fares by business and leisure travelers; excess capacity and financial difficulties of legacy air transportation carriers; and an increased demand for regional jets. JetBlue is one of the more prominent low cost carriers that concentrated operations in less congested airports like Long Beach, and its success is well-documented. Although the number of flights is limited, it is expected that passenger traffic at Long Beach will continue to grow as the national and regional economies continue to expand; however, growth will ultimately be constrained by the flight limits imposed by the Airport's Noise Compatibility Ordinance. By 2030, the Southern California Association of Governments, which is the region's major transportation planning agency, forecasts passenger capacity for the Long Beach Airport of 3.8 million passengers annually. The increase of approximately 925,000 passengers assumes that the Long Beach Airport will grow by approximately 1% per annum. More recent City of Long Beach forecasts show an estimated 4.2 million passengers by 2030, assuming full operations of 41 daily airline flights and 25 daily commuter or regional jet flights. This revised estimate suggests that the Airport will grow at an annual average rate of 1.5%. Increases will be supported by higher load factors on the 37 commercial flights, a change in the fleet mix, as well as increased utilization of commuter flights and not through an increase in the number of daily flights.

Table 6 provides a distribution of the domestic passenger traffic among the region's primary airports. Los Angeles International Airport is the region's dominant airport. While LAX does not have a rival with respect to international travelers, regional airports have consistently increased market share relative to LAX in recent years. In addition to competitive fares, regional airports are oftentimes less congested; passenger travel to and from regional airports is less costly; negotiating the modern security system is less time-consuming; and, since regional airports are less heavily utilized, the on-time performance of the air carriers servicing regional airports is better. All of these factors work in favor of smaller regional airports.

Table 6. Domestic Passenger Share by Airport

Year	LA International Airport	Ontario International Airport	Orange County	Burbank Airport	Long Beach Airport
2000	71%	10%	11%	7%	1%
2001	71%	10%	11%	7%	1%
2002	67%	11%	13%	7%	2%
2003	64%	10%	14%	8%	5%

The Long Beach Airport, like other airports, draws the bulk of its clientele from the geographical area in close proximity to the airport. Approximately 60% of all enplaned passenger tickets purchased are purchased by individuals or firms in Los Angeles County. Orange County accounts for 35% of all tickets sold, with other counties accounting for the remaining 5%. Individuals and firms in the Greater Long Beach Area³ account for 16% of all tickets sold.

³ We define Greater Long Beach to include Long Beach, Lakewood, Los Alamitos, Seal Beach, Sunset Beach and Surfside.

B. Air Cargo

While air cargo does not receive much attention in the public's view of airports, it is an increasingly important component to the "just-in-time" inventory strategy of most firms. Freight shipped via air tends to be higher dollar-weighted goods than freight sent by other modes of transportation. Table 7 lists the volume of air cargo, measured in 1,000 pounds, over the last ten fiscal years. Of the 41 daily flights operating from the Long Beach Airport, just 5 are cargo flights.

Table 7. Air Cargo (in 1,000 lbs) at Long Beach Airport, 1994-2003 FY

Year	Enplaned	Deplaned	Total	Growth
1994	39,090	18,711	57,801	
1995	34,382	19,177	53,559	-7%
1996	49,524	24,241	73,765	38%
1997	44,551	21,485	66,036	-10%
1998	50,457	26,858	77,315	17%
1999	55,486	34,066	89,552	16%
2000	62,639	37,405	100,044	12%
2001	67,705	46,571	114,276	14%
2002	64,858	47,477	112,335	-2%
2003	66,498	48,805	115,303	3%

Typically the volume of goods that are shipped out of the area exceeds the volume of goods shipped into the area. This reflects the size and diversity of the region's economy. Inasmuch as air cargo involves the shipping of final or intermediate goods, the volume levels are affected by the strength of the national economy. During recessions, one expects volume levels to fall off.

Most of the air cargo handled at the Long Beach Airport arrives and leaves via dedicated transport, either Airborne Express, FedEx, or UPS. Unlike other airports, the Long Beach Airport does not handle much air cargo in passenger airlines. The expectation is that air cargo at the Long Beach Airport will continue to be an important component in the overall operations of the airport but will not become a major feature of the airport.

C. Air Transportation and Related Activities

Despite the fact that the Long Beach Airport is one of the busiest airports in terms of general aviation, the airport has seen a steady decline in usage as measured by takeoffs and landings, as can be seen in Table 8. While it would appear that general aviation is declining at the Long Beach Airport, a more plausible explanation is related to the changing composition of general aviation usage at the airport.

Table 8. General Aviation and Related Takeoffs & Landings, 1994-2003 FY

Year	Gen. Aviation	Air Carrier	Air Taxi	Military
1994	447,459	11,596	787	1,679
1995	475,823	7,588	1,438	3,075
1996	597,873	9,908	6,053	2,268
1997	433,958	9,035	4,678	1,596
1998	433,826	9,727	6,278	1,279
1999	480,538	15,518	6,535	2,033
2000	392,130	12,623	6,416	1,385
2001	344,937	9,913	6,400	764
2002	328,952	11,973	8,906	83
2003	303,238	27,702	7,501	929

Nationally, the FAA lists 217,000 aircraft as general aviation aircraft, with 68% of these aircraft used for personal use. In recent years, urban airports, including the Long Beach Airport, have become more expensive or higher cost airports (hangar rental, land costs, etc.) than outlying airports such as Fullerton, Chino, El Monte, etc. Much in the same way that housing costs encourage the population to migrate to more affordable areas, personal aircraft owners behave in a similar pattern. In fact, the decline in general aviation is observed at other area airports such as Bob Hope, John Wayne, and Ontario.

National data indicates that approximately 17% of general aviation aircraft are owned by corporations or businesses. The Long Beach Airport is likely to experience an increase in general aviation of corporate and business-owned aircraft since this usage is related to business travel and tends to be less price sensitive than personal usage. In addition, fractional ownership of aircraft, which spreads the fixed cost over a large group of owners, is likely to increase the use of aircraft by corporations and businesses.

D. Economic Impacts

The Long Beach Airport, like other airports, has four principal functions or activities that generate direct on-site expenditures. These include:

- 1. Airlines:** Major and Regional Air Carriers (America West Airlines, American Airlines, Horizon/Alaska, and JetBlue Airways); Charter Airlines; General Aviation; Air Cargo (FedEx, Airborne Express, and UPS); and Military Aviation Operations.
- 2. Other Airport Tenants:** Food & Beverage Concessions; Retail Concessions; Fixed Base Operators; Ground Transportation; Rental Cars; and others.
- 3. Airport Services:** Insurance; Leasing/Financial/Sales; Telecommunications; Aircraft Maintenance; Fuel & Oil; Ground Handlers; Planning; Engineering; Construction; and other.
- 4. Airport Administration:** Federal and Local Government Services.

These Airport on-site firms support passenger (commercial and general aviation) and air cargo activities. Listed below are the activities and expenditures associated with Airport usage.

1. **Passengers:** Transportation/Parking; Hotels/Restaurants; Tourism/Attractions; Retail Purchases; Travel Agents; Financial Services; and Conferences/Convention.
2. **Air Cargo:** Suppliers; Freight Forwarders; Transportation Services; and Warehousing.
3. **General Aviation:** Corporate Aircraft; Private Aircraft; and Fixed Base Operators.

The Airport on-site firms coupled with the activities associated with the movement of people and goods generate a total economic impact in terms of earnings, employment, and taxes. These total impacts are composed of both direct and indirect impacts.

E. Direct Impacts of Long Beach Air Transportation and Related Activities

When we restricted our sample of firms to those directly involved in or directly supporting air transportation, we found 47 establishments. These establishments generated direct employment of slightly less than 2,500 jobs. These airport jobs generated an estimated payroll of \$116 million.

**Table 9. Long Beach Air Transportation and Related Activities
Direct Economic Impact, 2003**

	Impacts
Employment	2,479
Payroll	\$115.8 mn
Average Payroll	\$46,700
Output	\$449.5 mn

As Table 9 indicates, air transportation and related activities jobs are associated with an average payroll that is lower than the average payroll for the Long Beach Airport Complex. By restricting our sample to establishments operating at the Airport, we exclude the relatively high-paying manufacturing jobs in the greater Airport area. Employment at the airport is relatively more concentrated in lower-paid service sector and transportation jobs (such as clerks in retail operations and operators of Airport shuttle buses). Even after restricting our sample, we still find that the average payroll in Long Beach Air Transportation and Related Activities is higher than the \$40,928 average pay for Los Angeles County.

F. Indirect Impacts (Multiplier Effect)

As in the section above, we can compute both the direct and indirect impacts of establishments involved in Long Beach Air Transportation and Related Activities. As Table 10 indicates, the 2,479 jobs supported by air transportation and related activities

indirectly supported another 3,900 jobs in the region, leading to a total impact (direct plus indirect) of over 6,400 jobs in the region.

Similarly, as the \$116 million in earnings generated by employment in Long Beach Air Transportation and Related Activities are spent in the local economy, they lead to the creation of an additional \$150 million in earnings across the region. Thus, regional earnings associated with employment in Long Beach Air Transportation and Related Activities totaled \$266 million.

**Table 10. Total Economic Impacts
Long Beach Air Transportation and Related Activities, 2003**

	Employment		Earnings		Output	
	Direct	Total	Direct	Total	Direct	Total
Impact	2,479	6,401	\$115.8 mn	\$266.7 mn	\$449.5 mn	\$983.9 mn

Finally, the \$450 million in goods and services produced in these establishments stimulated the production of an additional \$530 million in goods and services in the region, leading to a total regional output impact of over \$980 million.

G. Convention Visitors, Tourists, and Air Passenger Traffic at the Long Beach Airport

The economic impact analysis employed is primarily driven by the payroll and employment data of the on-site operations. Since the input-output tables used to calculate the indirect effects focus on supply-side elements of economic activity, what is missing is the demand-side activities of the contribution of airline passengers (business, convention and leisure travelers) on the Long Beach economy. While we do not have precise estimates of the number of tourists traveling via the Long Beach Airport who also utilize the City's hotels, restaurants, retail establishments, attractions, etc., we are able to provide an estimate based on an earlier study which analyzed the impact of overnight visitors on the Long Beach economy.⁴

In 2003, there were approximately 415,000 overnight visitors in Long Beach. National data indicate that 17% of all overnight visitors travel by air. This national data likely understates the magnitude for cities that have a large component of their economy dedicated to tourism, but it does establish a lower bound. For Long Beach, this implies that 71,000 of its visitors traveled by air. Lacking hard data, we make a deliberately conservative estimate that only one-third of these visitors used the Long Beach Airport with the remaining visitors using other airports. This translates to an estimate of 24,000 overnight visitors using the Long Beach Airport annually. To put this number in perspective, this estimate would imply that only 1.7% of all deplaned passengers were overnight visitors in Long Beach. This is a lower bound estimate of the impact on the

⁴ "The Economic Impact of Overnight Visitors in the Long Beach Economy," Lisa M. Grobar and Joseph P. Magaddino, April 21, 2003

city's economy. Based on our earlier work, we estimate that this number of overnight visitors would generate \$8.8 million in hotel expenditures and \$8.1 million in restaurant, retail, attraction, and other expenditures. Stated differently, we estimate that visitors who utilized the Long Beach Airport generated direct expenditures of at least \$16.9 million in Long Beach. These expenditures accounted for approximately 7% of the total economic impact of overnight visitors on the city's economy. To the extent that the Long Beach Airport provides out-of-area customers with ease of access and competitive fares, these factors enhance the ability of the Long Beach Visitors and Convention Bureau in attracting conventioners and tourists to the city.

In addition to overnight visitors, flight crews represent a significant addition to the City's economy in terms of hotel and other expenditures. Hours of service regulations restrict the number of hours a commercial pilot may fly. As a consequence, these flight crews are routinely housed in the city between flights. Airlines, like other firms, provide their employees with a per diem allowance to cover food and other expenses while housed outside of their residences. In 2003, commercial airline flight crews spent \$2.3 million on hotel lodging and \$1.4 million on food, beverage, and related expenditures. Combining the tourist and airline crew expenditures yields \$11.1 million in hotel expenditures \$9.5 million of restaurant and other expenditures, for a combined total of \$20.6 million of expenditures within the City of Long Beach.

H. Increased Passenger Traffic and Its Impact on Employment

As mentioned earlier in this report, the SCAG regional transportation plan estimates that airline passenger traffic will rise to 3.8 million passengers by 2030. More recent City forecasts point to 4.2 million, but for the purpose of this report, and given its 2003 data baseline, we are using SCAG's forecast. Embodied in the SCAG forecast is the current level of flight operations (41 commercial and 25 commuter airline slots) in compliance with the Noise Compatibility Ordinance. As the airport's customer base expands the economic impact of the airport will continue to grow. An important issue for the community is the employment impacts associated with future growth. A recent paper⁵ written by Jan K. Brueckner sheds light on this issue. Brueckner studied the relationship between airline passenger traffic and employment in U.S. metropolitan areas. He confirmed the commonly held belief that good quality airline service is an important factor in determining economic development. His empirical results suggest that a 10% increase in passenger enplanements would lead to an increase in the *service-related* employment of 1%. Of particular note, an increase in enplanements has little impact on manufacturing-based employment. With overall reductions in transportation costs, manufacturing facilities can locate virtually anywhere. This flexibility related to transportation costs, in part, explains the phenomenon of manufacturing processes that are global in nature.

⁵ Brueckner, Jan K., "Airline Traffic and Urban Economic Development," *Urban Studies*, July 2003, v. 40.

Unlike manufacturing, service-based employment oftentimes depends upon face-to-face encounters. The prospect of high-quality airline services attracts new service-based firms to the region and stimulates the employment of existing service-based metropolitan firms. In 2003, Long Beach had 165,000 service-based jobs in its economy. Brueckner's estimate implies that an increase in enplanements of 145,000 would generate an additional 1,650 jobs in the service-based sector of the Long Beach economy. In many ways, Long Beach is better positioned than other metropolitan areas to capture this additional employment growth since Long Beach has land adjacent to its airport to develop.

VI. Fiscal Impacts

There are a variety of taxes and fees which are received by the City of Long Beach or the Long Beach Airport Enterprise Fund. Inasmuch as the focus of the study is Long Beach, no attempt is made to estimate other governmental receipts beyond those accruing to the City or Airport. The fiscal impacts involve revenues paid to the Long Beach Airport Enterprise Fund as fees or charges for services and tax receipts associated with enterprises utilizing the Long Beach Airport Area Complex. The Airport Enterprise Fund was created by the City of Long Beach to fund Long Beach Airport operations, capital, and other costs. The Enterprise Fund operates without City General Fund support, and approximately 30% of the Airport operating funds go to purchase services from the City General Fund and other City operating units, such as Police, Fire, City Attorney, City Council, Community Development, and Engineering/Public Works.

A. Fees and Charges for Services

Table 11 itemizes the revenues received by the Airport Enterprise Fund in fiscal year 2003.

Table 11. Long Beach Airport Enterprise Revenues, 2003

Description	Revenue	Percentage
Parking ⁶	7,700,000	32.2%
Fixed Base Operations	3,500,000	14.6%
Car Rentals	3,400,000	14.2%
Landing Fees	3,000,000	12.6%
Non-Aviation	2,200,000	9.2%
Common Use	1,500,000	6.3%
Miscellaneous	2,600,000	10.9%
Total	23,900,000	100.0%

As can be seen from Table 11, parking fees are an important generator of fees to the Airport. Part of the proposed modernization of the terminal and related facilities is

⁶ Parking fees are gross revenues and do not include management, operations, and sub-lease fees.

construction of additional parking facilities. At present, the Airport leases off-site parking spaces, with a month-to-month lease, to accommodate airline travelers.

Table 12 itemizes the property tax revenues received by the City from the establishments in the Long Beach Airport Complex.

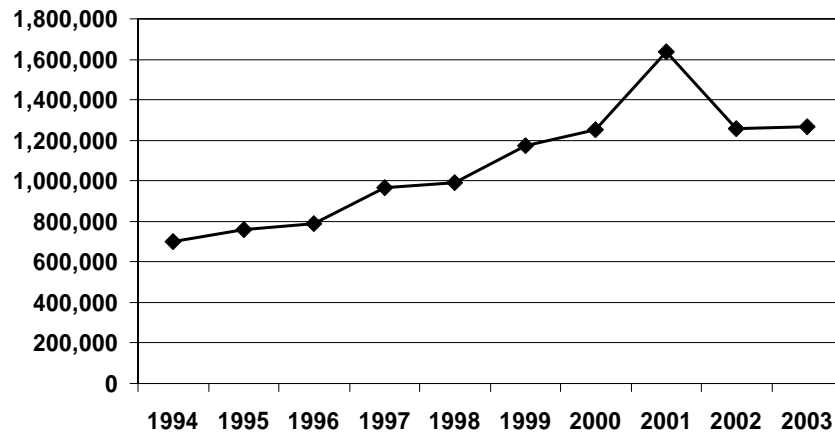
Table 12. City Property Tax Revenue Long Beach Airport Area Complex

Category	Revenue	Share
Commercial	133,700	7%
Industrial	824,700	42%
Recreational	6,700	0%
Vacant Land	12,500	1%
Possessory Int.	150,400	8%
Unsecured ⁷	850,900	43%
Total	\$1,978,900	100%

Figure 3 provides a profile of taxable sales revenues associated with the Long Beach Airport Area Complex. As can be seen by the data, taxable sales and their associated revenue stream are affected by the general economic conditions of the region. As the national economy moved into a recession in March 2001, the regional economy began to slow and that, in turn, reduced the growth in taxable sales. In 2003, the taxable sales revenues captured by the City from within the study area were \$1.3 million.

⁷ The “unsecured” category refers to revenues derived from a personal property tax levied on the business personal property owned by tenants. Examples would range from smaller items such as office computers, and fax machines, to more valuable items such as heavy machinery and aircraft.

Figure 3. Long Beach Airport Area Complex Taxable Sales Revenues



There are a variety of other taxes and fees that are received by the City or Airport that are not itemized in the report. They include the transient occupancy tax, business license taxes, utility user taxes, and so forth. This data was not included either because of confidentiality issues or the cost of assembling the data was too large. As a consequence, the \$27.2 million in fees and other tax revenues received by either the City or the Airport from the Long Beach Airport Area Complex is a lower bound estimate of the total fiscal impact.

VII. Conclusions

The Long Beach Area Airport Complex, the geographical area bordered by the San Diego Freeway, Carson, Clark and Cherry, is an important and integral part of the City's economy. This area is dominated by the presence of the Long Beach Airport and the Boeing Company. The Airport supports commercial and general aviation as well as related activities. While aerospace aviation employment is dominated by the Boeing Company, many other aircraft and related manufacturers operate their businesses within this footprint. In 2003, approximately 16,000 jobs or 8% of the City's employment base came from this area. These 16,000 jobs, in turn, created an additional 32,000 jobs raising the total employment impact within the region to 48,000 jobs. The direct jobs in Long Beach have an annual payroll of \$1.04 billion and an average payroll of \$65,000.

The Long Beach Airport is a small hub airport serving approximately 3 million passengers annually. Long Beach Air Transportation and Related Activities account for almost 2,500 jobs and generated a payroll of \$116 million in 2003. These jobs, in turn, generated a total economic impact of 6,400 jobs and an annual payroll of \$267 million in

the region. The Airport is clearly an important component of the overall vitality of the City's economy. The proximity of Douglas Park to the Long Beach Airport greatly enhances the ability of the City to capture growth in jobs associated with increases in Airport activity. The close proximity of the Airport also works to the advantage of Douglas Park as the developers seek to attract firms to the site.

In 2003, there were significant and sizable economic impacts on the City and region from the economic activities in the Long Beach Airport Area Complex. More importantly, the prospects for the future growth remain very bright. We believe that the market will support enhanced uses of the Airport and the adjacent land within the current framework of the Airport Noise Compatibility Ordinance, ensuring a quality of life and economic vitality for the citizens of Long Beach.

APPENDIX A

Long Beach Airport Tenant Directory

COMPANY NAME
A J's Automotive
Advanced Airborne Service, Inc.
Aerial Promotions
Aerial Sign Company
Aero Technology, Inc.
Aeroplex (Aerolease Long Beach)
Aeroport Deli
Aerospruce Professional Bldg./Preferred Investments
Aerotec Services, Inc.
Air Combat U.S.A.
Air Cruise America
Air L.A.
Airborne Express
Aircraft Ground Equipment
AirFlite, Inc. (Toyota Aviation)
Airserv
Alaska Airlines
Amazing Grace
America West Airlines
American Airlines
American Express Financial Advisors
AMPCO System Parking, Inc.
Analytical Graphics
Anderson Aircraft Parts
AP Donald Douglas c/o Abbey Co.
Arden Realty Group
Ardizzone Consulting
Arnold & Arnold, Inc.
Assistance in Marketing
Automatic Terminal Information System (ATIS)
Automobile Club of Southern California
Aviation West
Avis Rent-A-Car System
Avitat
BAE Systems
Bell & Bell
Biplane Rides
Boeing Company
Boeing Fire/Security, C-17
Boeing Fire/Security Department, Government

Long Beach Airport Tenant Directory

COMPANY NAME
Boeing Fire/Security Department, Commercial
Boeing Flight Security Ops
Bollington and Roberts, Law Offices
Budget Rent-A-Car of Long Beach
California Detailing
Carlson Marketing Group
Carlton Browne and Company
Catalina Flying Boats
Century 21 Insurance
Ces-Air Aircraft Maintenance, Inc.
Cessna Citation
Chevron Service Station
Civil Air Patrol Group
Coast Storage Corporation
Compuware
Concepts 4, Inc.
Corbin & Wertz
Crane Morely
Cuba Travel
D. Davis & Associates
DeVry Institute
DMJM
Don Temple Storage
Eagle Aviation, Inc.
El Dorado Food Service
Enterprise Rent A Car Corp. of Los Angeles
Epson America, Inc.
Epson Business Solution Group
Exxon Mobil
FAA Air Traffic Control Tower
FAA Flight Standards District Office
FAA Los Angeles Aircraft Certification Office
FAA Los Angeles Manufacturing Inspection
Federal Express (Aircraft Loading Center)
Federal Express (Packages Drop-Off)
Fidelity National Title
Financial Counseling Resources, Inc.
Fireside Thrift
Fitness Center, Inc.
Flight Pros, Inc.
Flight Safety International, Inc.

Long Beach Airport Tenant Directory

COMPANY NAME
Flight Services (Hawthorne Automated Flight Service)
Flying M Associates
Foreign Trade Institute
Fuel Controls, Inc. (Long Beach Terminal II Jet Center)
Gaylord & Dumars
Gentelco West Credit Union
Globe Airport Security Services, Inc.
Goodyear Airship
Guest House Hotel
Gulfstream Aerospace Corporation
Hagelin Aircraft Motors Co., Inc.
Hamilton Sundstrand Worldwide Repair (United Technologies Corporation)
Harris Corporation
Hart Air
Hertz Corporation
Holiday Inn Hotel Long Beach Airport
IBEX (FAA Weather)
Insights
Integrated Transportation Services, Inc.
International Aero Partners, LLC
Island Express Helicopters
J. Perez Associates, Inc.
JPE Catering
JetBlue Airways
Kelly Temporary Services
Kilroy Long Beach Associates
Komar Aviation
Lawrence Taylor, Law Office of
Leading Edge Aircraft Detailers
Lightship Group, The
London Consultants
Long Beach Physical Therapy (Matrix)
Long Beach Airport Business Park
Long Beach Airport Land Corp. Properties (Olen Properties)
Long Beach Aviation Building
Long Beach Avionics
Long Beach Christian Fellowship
Long Beach, City of - Fire Department
Long Beach, City of - Fire Station No. 16

Long Beach Airport Tenant Directory

COMPANY NAME
Long Beach, City of - Fire Station No. 19
Long Beach, City of - Fire Firefighter's Local 372
Long Beach, City of - Police Department
Long Beach, City of - Police Helicopter Facility
Long Beach CMCI
Long Beach Flying Club
Long Beach Helicopters, Inc.
Long Beach Physical Therapy
Long Beach Terminal II Jet Center (Fuel Controls, Inc.)
Long Beach Transit
Long Beach Yellow Cab (Taxi Systems, Inc.)
Los Angeles, County Sheriff's Aero Bureau
Los Angeles International Airport
MM Internet
Marriott Hotel
Mercury Air Centers
Million Air Long Beach (North)
Million Air Long Beach (Main Office)
Million Air Valet
Mutual of America
National Car Rental System
National Transportation Safety Board
Netmax
North American Title Company
Nova Vision Center
NuVision Financial Federal Credit Union
Oasis Aviation, Inc.
Olen Properties (Long Beach Airport Land Corp. Properties)
Orange County Airport
Parcel J (Westland Partners)
Paster Aviation (U.K. Flight Services/L.B. Flight Center)
Petrowings
Pilot Supply Shop
Polk Company
Poseidon Resources Corporation
Preferred Investments
Rainbow Air Academy
REMC
Remedy Intelligent Staffing
R.L. Polk & Co.

Long Beach Airport Tenant Directory

COMPANY NAME
Rotor Aviation
Royal Catering Corporation
Savvis Communications Group
SCAN Health Plan
Selectacall of the West
Senn-Delaney Leadership Consulting Group
Sky Chef International Services, Inc.
Sky Interior, Inc.
Smarte Carte
StarMed
Surface to Air Aviation
Superior Aircraft Services
Teledyne Controls
Texaco Refining & Marketing, Inc.
Thielen Investigations, Inc.
Thomas Staffing
Tombo Aviation, Inc.
Tom's Aircraft Maintenance, Inc.
Toyota Aviation (AirFlite, Inc.)
Tra Pac
Transamerica Leasing, Inc.
Transportation Security Administration
Tri-Motor
U.K. Flight Services (L.B. Flight Center)
U.S. Helicopter (Los Angeles Helicopters)
Unisource Discovery
United Labor Bank
United Parcel Service, Inc. (Aircraft Loading Center)
United Technologies Corporation (Hamilton Sundstrand Worldwide Repair)
United Technologies Corporation (Pratt Whitney Aircraft Division)
Urban Science Applications
Veridian
Volpe National Transportation Systems
West Coast Charters
Weather FAA (IBEX)
West Coast Dialysis Center
Westland Constructions, LLC
Windy Company

APPENDIX B

Long Beach Airport Complex, List of Firms

COMPANY NAME
A J's Automotive Tune Up Ctr
Advanced Airborne Svc Inc
Aerial Promotions Inc
Aero Technology
Aeronautical Technology Inc
Aeroplex Aviation
Aeroport Deli
Aerotec Services
Airborne Express (Package Drop-Off)
Aircraft Ground Equipment
Airflite Inc.
Airport Shuttle Services
Airserv
Alaska Airlines
America West Airlines
American Airlines
American Express Financial Adv
Ampco System Parking, Inc.
Analytical Graphics Inc
Anderson Aircraft Parts
AP Donald Douglas C/O Abbey Co.
Arden Realty Group Inc
Ardizzone Consulting
Arnold & Arnold Inc Adjusters
Assistance In Marketing La
Automobile Club Of Southern California
Aviation West Flight School
Avis Rent A Car System, Inc.
Avitat
Bae Systems
Bell & Bell
Biplane Rides
Boeing Co
Bollington And Roberts, Law Offices
Budget Rent-A-Car Of Long Beach
California Detailing
Carlson Marketing Group
Carlton Browne And Company
Catalina Flying Boats Air
Ces-Air Aircraft Maintenance

Long Beach Airport Complex, List of Firms

COMPANY NAME
Cessna Citation Svc Ctr
Chevron Stations Inc
Civil Air Patrol Group
Coast Storage Co
Compuware Corp
Concepts 4 Inc
Corbin & Wertz
Crane Morley Inc
Cuba Travel Svc
D. Davis & Associates
De Vry Institutes Of Tech
Don Temple Storage
Eagle Aviation
El Dorado Food Service
Enterprise Rent A Car
Epson America Inc
Exxon Mobil
FAA Air Traffic Control Tower
FAA Flight Standards District Office
Federal Express
Fidelity National Title
Fireside Thrift Co
Fitness Center
Flight Pros, Inc.
Flight Safety Intl
Flying M Associates
Foreign Trade Institute
Fuel Controls Inc
Gentelco West Credit Union
Globe Airport Security Service Inc
Gulfstream Aerospace Corp
Hagelin Aircraft Motors
Hamilton Sundstrand
Harris Corporation
Hart Air
Hertz Rent A Car
Insights
J Perez Assoc
JetBlue
Kelly Services Inc
Kilroy Airport Ctr

Long Beach Airport Complex, List of Firms

COMPANY NAME
Komar Aviation Group
Lawrence Taylor Law Office Inc
Limo Services
Long Beach Aviation Building
Long Beach Avionics
Long Beach Christian Fellowship
Long Beach Cmc
Long Beach Flying Club
Long Beach Helicopters, Inc.
Long Beach Physical Therapy
Long Beach Terminal II Jet Center (Fuel Controls, Inc.)
Long Beach, City Of
Los Angeles, County Sheriff's Aero Bureau
M M Internet
Marriott Hotel
Mercury Air Ctr
Million Air Long Beach
Million Air Valet
Mutual Of America
National Car Rental System/Alamo
North American Title Co
Nova Vision Center
Nuvision Financial Federal CU
Parcel J (Westland Partners)
Paster Aviation (U.K. Flight Services/L.B. Flight Center)
Petrowings
Pilot Supply Shop
Polk Direct
Poseidon Resources Corp
Preferred Assets Management
R.L. Polk & Co.
Rainbow Air Academy
Remc Inc
Remedy Intelligent Staffing
Rotor Aviation
Savvis Communications Corp
Scan Health Plan
Senn Delaney Leadership
Sky Interior, Inc.
Superior Aircraft Services
Surface To Air Aviation

Long Beach Airport Complex, List of Firms

COMPANY NAME
Thielen Investigation Inc
Thomas Staffing
Tombo Aviation Inc
Tom's Aircraft Maintenance
Trans Pacific Container Services
Transamerica Leasing Inc.
Transportation Security Administration
U.S. Helicopter (L.A. Helicopters)
Unisource Discovery
United Labor Bank
United Parcel Service Inc
United Technologies Corporation
UPS Truck Leasing, Inc
Urban Science Applications Inc
Veridian (General Dynamics)
Volpe National Transportation Systems
West Coast Charters
West Coast Dialysis Ctr
Westland Construction
Windy's World, Inc
Yellow Cab

APPENDIX C

Long Beach Airport Dependent Activities

COMPANY NAME
Advanced Airborne Svc Inc
Aerial Promotions Inc
Aero Technology
Aeronautical Technology Inc
Aeroplex Aviation
Aeroport Deli
Aeroxec Services
Airborne Express (Package Drop-Off)
Aircraft Ground Equipment
Airflite Inc.
Airport Shuttle Services
Airserv
Alaska Airlines
America West Airlines
American Airlines
Ampco System Parking, Inc.
Anderson Aircraft Parts
Aviation West Flight School
Avis Rent A Car System, Inc.
Biplane Rides
Boeing Co
Budget Rent-A-Car Of Long Beach
Catalina Flying Boats Air
Ces-Air Aircraft Maintenance
Cessna Citation Svc Ctr
Civil Air Patrol Group
Coast Storage Co
Cuba Travel Svc
Don Temple Storage
Eagle Aviation
El Dorado Food Service
Enterprise Rent A Car
FAA Air Traffic Control Tower
FAA Flight Standards District Office
Federal Express
Flight Pros, Inc.
Flight Safety Intl
Flying M Associates
Fuel Controls Inc
Globe Airport Security Service Inc

Long Beach Airport Dependent Activities

COMPANY NAME
Gulfstream Aerospace Corp
Hagelin Aircraft Motors
Hamilton Sundstrand
Hart Air
Hertz Rent A Car
JetBlue
Komar Aviation Group
Limo Services
Long Beach Avionics
Long Beach Flying Club
Long Beach Helicopters, Inc.
Long Beach Terminal II Jet Center (Fuel Controls, Inc.)
Long Beach, City Of
Los Angeles, County Sheriff's Aero Bureau
Mercury Air Ctr
Million Air Long Beach
Million Air Valet
National Car Rental System/Alamo
Parcel J (Westland Partners)
Paster Aviation (U.K. Flight Services/L.B. Flight Center)
Pilot Supply Shop
R.L. Polk & Co.
Rainbow Air Academy
Rotor Aviation
Superior Aircraft Services
Surface To Air Aviation
Tombo Aviation Inc
Tom's Aircraft Maintenance
Trans Pacific Container Services
U.S. Helicopter (L.A. Helicopters)
United Parcel Service Inc
United Technologies Corporation
UPS Truck Leasing, Inc
Veridian (General Dynamics)
Volpe National Transportation Systems
West Coast Charters
Yellow Cab

APPENDIX D

Long Beach Air Transportation and Related Activities

COMPANY NAME
Aerotec Services
Airborne Express (Package Drop-Off)
Aircraft Ground Equipment
Airport Shuttle Services
Airserv
Alaska Airlines
America West Airlines
American Airlines
Ampco System Parking, Inc.
Avis Rent A Car System, Inc.
Budget Rent-A-Car Of Long Beach
Catalina Flying Boats Air
Ces-Air Aircraft Maintenance
Cessna Citation Svc Ctr
Civil Air Patrol Group
Cuba Travel Svc
Enterprise Rent A Car
FAA Air Traffic Control Tower
FAA Flight Standards District Office
Federal Express
Flight Pros, Inc.
Flying M Associates
Fuel Controls Inc
Gulfstream Aerospace Corp
Hamilton Sundstrand
Hart Air
Hertz Rent A Car
JetBlue
Limo Services
Long Beach Helicopters, Inc.
Long Beach Terminal II Jet Center (Fuel Controls, Inc.)
Long Beach, City Of
Mercury Air Ctr
Million Air Long Beach
National Car Rental System/Alamo
Parcel J (Westland Partners)
Paster Aviation (U.K. Flight Services/L.B. Flight Center)
R.L. Polk & Co.
Rotor Aviation

Long Beach Air Transportation and Related Activities

COMPANY NAME
Superior Aircraft Services
Tom's Aircraft Maintenance
Trans Pacific Container Services
U.S. Helicopter (L.A. Helicopters)
United Parcel Service Inc
UPS Truck Leasing, Inc
West Coast Charters
Yellow Cab